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09/726,831	11/30/2000	Neal A. Osborn	35451/102	1494

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EXAMINER

QUILLEN, ALLEN E

ART UNIT PAPER NUMBER

2676

DATE MAILED: 01/20/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/726,831

Applicant(s)

OSBORN ET AL.

Examiner

Allen E. Quillen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 1, 2, 15, 16, 22 and 23 are amended; claims 1-30 are pending. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 15, 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The use of the term "automatically" is not in the specification, nor can the Examiner find where the invention is described in enough detail to abstract its use, therefore it is "new matter".

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-6, 15-19, 21-26, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji, et al, U.S. Patent 6,522,347, and Vouri, et al, U.S. Patent 5,767,834, as applied to claim 1 above, in further view of Barnaby et al, U.S. Patent 6,006,303 and Suzuki et al, U.S. Patent 6,463,445.

6. Regarding claim 1, representative of claims 15, 21, 22 and 28, as best understood by the Examiner, Tsuji discloses a computing device (column 1, lines 9-20), comprising: a communications bus (Figure 3, Column 15, line 20 through Column 16, line 13); a display

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configured to display in more than one display mode and coupled to the communications bus (Figure 1, Figure 3, elements 13 and 15A, Column 14 line 8 through Column 15, line 6); a processor, coupled to the display and to the communications bus (Column 15, lines 20-50); and a memory coupled to the communications bus (Figure 3, element 12, Column 15, lines 28-56; Figure 4, element 15), the memory configured to receive and provide access to display information to be communicated to the display (Column 15, lines 51-55), the memory being controlled by display logic the display logic being configured to manage the memory (Column 15, lines 20-27) and allocate the memory according to the display mode and the display logic is configured to change the display mode during operation of the computing device (Column 19, lines 15-17; Column 22, lines 21-31; 58-64).

Tsuji does not disclose the disclose modes including at least one of resolution modes and color modes. Vouri teaches display modes including at least one of resolution modes and color modes (Column 7, lines 20-37; Column 9, lines 39-59; Column 5, lines 33-37). The motivation for combining PDA display with multiple display modes and the logic is to enable altering currently open applications, that use the screen resolution and/or color, without exiting or reloading the operating system (Column 1, lines 11-18, 33 through Column 2, line 45).

Tsuji does not disclose automatically change the display mode during operation of and initiated by an application. Suzuki teaches automatically change the display mode during operation of and initiated by an application (Column 3, lines 30-37, 48-49, 57-65; *JPEG*, Column 1, lines 20-22; 59-61; Column 9, line 63 through Column 10, line 9) in a networked graphics environment (Column 6, lines 49-54; Column 15, lines 38-42) [transcoding network content; unified memory architecture]. The motivation for combining display mode with

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automatically changing the display mode during operation of an application is to enable JPEG and video multimedia content to be communicated across a network (Internet, Column 2, lines 58-61) in multiple digital formats (Column 3, lines 9-23). Suzuki is evidence that at the time of the invention, it would have been obvious for one skilled in designing network clients to combine the benefits of changing the display mode, as Tsuji discloses, with automatically changing the display mode during operation of an application, as Suzuki teaches, to enable network communications using various digital formats.

Tusji does not disclose according to changing graphical needs. Barnaby teaches according to changing graphical needs (Column 1, lines 31-38; 18-22; *change in video resolution; dynamically activating a DMA operation and for varying the amount of data transferred on a DMA operation*) in a PDA graphics controller (Column 21, lines 18-23). The motivation for combining changing display mode with according to changing graphical needs is to enable real time data transfers in a complex-memory-core bus priority and arbitration scheme while maintaining operational integrity of the microprocessor (Column 1, lines 8-22; Column 2, lines 18-40). Barnaby is evidence that at the time of the invention, it would have been obvious to one skilled in designing PDA networked clients to combine the benefits of changing display mode, as Tusji discloses, with according to graphical needs, as Barnaby teaches, to maintain microprocessor operations while the memory bus is being arbitrated by interrupt requests.

7. Regarding claim 2, representative of claims 16, 23, and 25, Tsuji discloses the computing device of claim 1, wherein the display mode is dependent upon the application running on the processor (Column 13, line 64 through Column 14, line 6; Column 42, lines 4-12).

8. Regarding claim 3, Tsuji discloses the computing device of claim 1, wherein the display mode is dependent upon the available memory (Column 40, lines 46-48).

9. Regarding claim 4, Tsuji discloses the computing device of claim 1, wherein the display mode is dependent upon the available memory bandwidth (see above; Column 15, lines 20-56).

10. Regarding claim 5, representative of claim 6, Tsuji discloses the computing device of claim 1, wherein the more than one display mode includes a high resolution and a low resolution display mode (Column 1, line 60 through Column 2, line 15; Figure 30-33, Column 53, lines 62 through Column 56, lines 1-9).

11. Regarding claim 12, Tsuji discloses the computing device of claim 1, wherein the more than one display mode includes a text display mode (Column 20, lines 13).

12. Regarding claim 14, representative of claims 20 and 27, Tsuji discloses the computing device of claim 1, wherein the memory includes random access memory (RAM) (Column 15, line 34).

13. Regarding claim 17, representative of claim 24, Tsuji discloses the personal digital assistant of claim 15, wherein the display mode is dependent upon a mode signal from the operating system (Figure 3, Column 15, lines 20-60; Figure 36, Column 48, lines 22-26).

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14. Regarding claim 18, Tsuji discloses the personal digital assistant of claim 15, wherein the display mode is dependent upon the display requirements of an application running on the processor (column 1, lines 49-53; Column 13, line 66 through Column 14, line 10; Column 19, lines 15-18).

15. Regarding claim 19, representative of claim 26, Tsuji discloses the personal digital assistant of claim 15, wherein the display includes a touch screen (see above, Column 15, lines 1-19; Column 19, line 1).

16. Regarding claim 29, Tsuji discloses the computing device of claim 22, wherein the computing device is included in a cellular phone (see above; Figure 3, element 15, Column 15, line 60 through Column 16, line 13).

17. Regarding claim 30, Tsuji discloses the computing device of claim 22, wherein the computing device is included in a hand-held device (Figures 22-24, 28, 29; 43, 52; Column 1, lines 14-20; Column 9, lines 58-60).

***Claim Rejections - 35 USC § 103***

18. Claims 7-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji, et al, U.S. Patent 6,522,347, Vouri, et al, U.S. Patent 5,767,834, Barnaby et al, U.S. Patent



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6,006,303 and Suzuki et al, U.S. Patent 6,463,445, as applied to claim 1 above, in further view of Shay, U.S. Patent 5,900,886.

19. Regarding claim 7, representative of claims 8 - 11, and 13, Tsuji discloses the computing device of claim 1, wherein the more than one display mode includes color display (Column 1, lines 28-33; Column 17, lines 45-50) mode.

Tsuji does not disclose monochrome, 8, 18 and 24 bit color display mode with 25,600 and 102,400 pixels. Shay teaches (PDA, Column 7, line 22-26) monochrome (Column 7, line 57), the 8, 18, 24 bit color display mode with 25,600 and 102,400 pixels (Column 4, lines 1-21; 480 x 320 is 153,600 pixels; Column 1, line 58; Column 7, lines 55-63; Figure 16, elements 94, 96, [1], [15:0], [3:0], [5], [7:5]).

The motivation for combining color and text display modes, RAM with multi-bit color control using various display pixel resolutions is improved display quality (Column 1, lines 23-24, 39, 60, Column 2, lines 12-17, 34-37). Shay is evidence that, at the time of the invention, it would have been obvious for someone skilled in the art of flat display processing to combine the benefits of color and text display modes, RAM memory, as Tsuji discloses, with multi-bit color low and high resolution control, as Shay teaches, to provide for an improved quality display of information.

***Response to Arguments***

20. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

21. Applicant asserts that references do not disclose, teach or suggest that the control logic is automatically configured to change the display mode during operation of the application running on the computing device according to the changing graphical needs of the application (Page 7, 4th Paragraph through Page 8).

22. The Examiner respectfully notes, however, that the features were made in the amended claims which required additional search and consideration of them. The Examiner has found references that teach the amended features. Suzuki teaches automatically change the display mode during operation of and initiated by an application (Column 3, lines 30-37, 48-49, 57-65; *JPEG*, Column 1, lines 20-22; 59-61; Column 9, line 63 through Column 10, line 9) in a networked graphics environment (Column 6, lines 49-54; Column 15, lines 38-42) [transcoding network content; unified memory architecture]. Barnaby teaches according to changing graphical needs (Column 1, lines 31-38; 18-22; *change in video resolution; dynamically activating a DMA operation and for varying the amount of data transferred on a DMA operation*) in a PDA graphics controller (Column 21, lines 18-23).

Furthermore, Examiner respectfully responds, however, that as best understood by the Examiner, in the amended claims, the term "automatically" is new matter. For Example, in the Specification Page 6, line 23, speaking to the mode issue, the Applicant states "operated at high resolution at the request of the user"; on Page 7, "according to either the application and/or the requirements of the operating system...should the application running; on Page 10, line 5,

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“according to the requirements of the displayed application” without positive modification that the user is not involved, and on Page 10, lines 10-12, “according to the needs of each application”, which may all be interpreted to mean that there are more than one application, and that each may be running independently of one another, and at different times, being invoked by the user based on the context of the interactions underway at the time. Nonetheless, the Examiner has found references that teach the display mode (resolution) is being changed automatically based on the client-side data requirements.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen E. Quillen whose telephone number is (703) 605-4584. The examiner can normally be reached on Tuesday – Friday, 8:30am – noon and 1:00 - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Matthew C. Bella, can be reached on (703) 308-6829.

#### **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

#### **Or FAX’d to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Sixth Floor (Receptionist), Arlington, Virginia

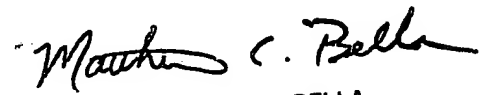
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number (703) 305-9600 or (703) 305-3800.

Allen E. Quillen  
Patent Examiner  
Art Unit 2676

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January 12, 2004



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